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SULLIVAN D. HARRIS, ... EDITOR & PROPRIETOR.

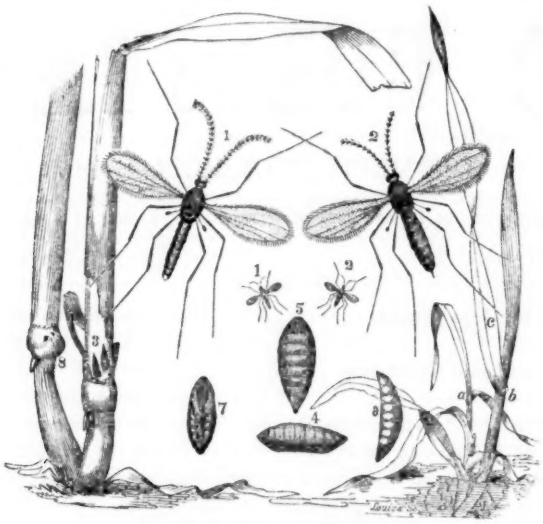
Rural Hints for the Season.

BY THE EDITOR OF THE OHIO CULTIVATOR.

HERE we are treading upon the edge of Winter. A pretty significant warning we have had for the last two weeks, and we doubt whether the first fortnight of the real winter, presents the "rugged issue" in so bold a form as this last fortnight of autumn has done. If the farmers are not ready for winter, we think it must be their own fault, for we seldom have so good a time to wind up the season's work, as the past fall, taken all together. We are glad to notice that a great many farmers who have been in the habit of leaving the husking of their corn till mid-winter, have had all hands in the fields, and now the golden ears are all snug in the crib. That is a good investment—a capital investment. Last year at this time, the corn was rotting on the stalk, rotting in the crib, rotting on the floor, and every where. Hogs were stuffed with mouldy stuff, cattle made up ugly faces over it, and farmers upon our broad bottoms, felt a good deal down in the mouth. This year it is a good deal otherwise—what we have is sound, and will keep. The summer feed has been good, and the cattle and hogs go to market in tip-top order. For these reasons a good many beeves have been sent forward, and some people have thought the price was to rule low all winter. We don't believe a word of it. When the flush of the grass-fed beef is used up, prices will come up as stiff as steelyards, and that will bring up wheat and corn too. We do not exactly see how the hog speculators are to get their money back at present prices, but the sharpest of them think they can see, and so as the farmer gets his pay, he can trust the speculator to paddle his own canoe.

We remarked rather fully a while back, about fixing up things around the barn and feeding grounds. For farmers who have not very large herds, it is better if they can all run together,—that is, large and small, horses, cattle and sheep, always provided that there are not vicious hookers and biters among the larger stock. The advantage is, that by such an assortment of tastes, all the fodder is picked up. But here is a thing should be attended to: We hear a good deal of women's rights, sailor's rights, etc., but we want to put in a word for calves' rights, and sheep's rights, when they are obliged to feed with the larger stock. To secure these, have a part of the sheds built so the larger animals cannot get under them, to molest the calves or sheep, which can take refuge there and sleep or chew their cuds in quiet. We have heard a story about a man who in building his house, had the carpenter cut a big hole for the big cat to go in at, and beside it a little hole for the little cat, and was laughed at because he did not let the little cat go in the same hole with the big cat. Now that man's philosophy would be just the thing for a mixed lot of cattle, sheep and calves, in the same barn-yard. Some farmers have the feeding places so well arranged that all these classes are put in separate stalls or pens, but there are ten to one who make no such provision. It is to this latter class that we commend this idea of calves' and sheep's rights, by the construction of low sheds or bars, to keep out domineering animals from the retreats of the little ones.

The season of short days and long evenings is upon us, and the muddy roads keep the folks at home. How are they spending their leisure? While we were talking at some of the Fairs this season, looking forward to just such a time as this, we said that as the farmers could not then cultivate their lands, it would be a first rate time to turn in and cultivate themselves. Light up the fires of family and neighborhood sociability, cultivate the graces of fraternity and mutual esteem, make yourselves worthy to be loved and had in honor, abolish the partitions of sect, party, clan, clique, and whatever else interposes to prevent a full assimilation of all the happy elements of society into one grand treasury of Reciprocity. Provide for Lectures, Discussions, Sociables, Reading Circles, and whatever else will make the people wiser, happier and better; and as a cheap and convenient means to all the above mentioned improvements, as well as a kind recognition of an old and tried friend, see that all your neighbors as well as yourself, subscribe for the OHIO CULTIVATOR for 1859.



Hessian Fly in Wheat.

Early sown fall wheat is liable to be infested with the Hessian Fly. It is a question sometimes, whether to sow early to escape the midge next year, or to sow late to escape the Fly the same fall. Most farmers prefer by far to escape the midge, as the most destructive. Notwithstanding the Hessian Fly has been so long among us, there are many farmers who do not know how the rascal looks in all his transformations. The larvæ, or flax-seed state, is shown at fig. 3; the pupa, or worm-like state, at fig. 4; the perfect or fly state, figs. 1, 1 and 2. 2—the smaller figures are the natural size of the Fly.

When this insect is in the second state, we call him "The Trooper," with his black helmeted head, with which he bores his way through the straw of the wheat stalk, as we have found him just before harvest. To head him when once in the tender plants in the fall, we know of but one way, and that is to graze off the wheat with sheep, in February, or thereabouts, before the spring growth commences, by which the worms are eaten out of the plants. But this process endangers the putting back of the time of ripening, so as to expose the crop to the midge, though if the wheat has got a good root, and the spring should be favorable, the growth will be but little retarded. The following items of description are collected from various authors and set forth by Mr. Klippart, in his Essay on Wheat, in the Agricultural Report.—Ed.

The head and thorax of the female, fig. 1–1, magnified and natural size, are black. The antennæ are about half as long as the body, and composed of sixteen joints, each of a cylindric oval form, the length being about double the diameter; each joint is clothed with a number of hairs, surrounding it in a whirl. The joints are separated from each other by very short translucent filaments, having a diameter about one-third as great as the joints themselves. The thorax is oval and black; the poisers are dusky; the abdomen is of a dark color above, more or less widely marked at the sutures (joints) with twany, fulvous lines, and furnished with numerous fine blackish hairs. The ovipositor is rose-red. The wings are slightly dusky. The legs are pallid brown, the tarsi black. The several pairs of legs equal each other in length, being about one-fifth of an inch long when extended, of which length, the tarsus embrace one-half. Short basal joint indistinct.

The *male*, fig. 2–2, natural size and magnified. The antennæ are three-fourths the length of the body. The abdomen consists of seven joints besides the terminal one, which consists of a transversely oval joint, giving off two robust processes, armed with incurved hooks at the tips. In the living specimen the abdomen is of a brownish-black color, more or less widely marked at the sutures with pallid fulvous or smoky whitish lines. In all other points the male coincides with the female in its character.

The female deposits her eggs upon the young wheat leaves in September and May, between the minute ridges of the blade. They appear as minute reddish spots, and are cylindrical in shape, being about one-fiftieth of an inch in length, and one-two-hundred and fiftieth in width.

The eggs laid in the autumn hatch in a week, if the weather be warm, or two or three weeks if cold and unfavorable, and produce white maggots, which pass down the leaf, between the sheath and stem, until it reaches the first joint or crown, and remains fixed upon the stem, head downwards, fig. 3, until it assumes the pupa form.

The young fall wheat attacked by these maggots, wither next spring, while others proceeding from the same root will remain unaffected, and their death is caused by the nutritious juice being abstracted from the shoot. The spring hatched maggots attach themselves to the second or third

joint of the plant, which is better able to resist their injurious influence. Fig. *a* represents a plant withering from the effect produced by these maggots, while the stalk *b*, a tiller from the same root, is unaffected, and hence wheat which tillers well is less liable to suffer extensively than varieties less disposed to this process.

The maggots seem to live by suction alone, as they do not penetrate the stalk, and the injury they cause to summer wheat seems to be by their pressure between the leaf and enclosed stem, preventing the circulation of sap, and the deposition of silica, upon which the strength of the wheat straw and its ability to resist winds, etc., greatly depends. Sometimes a swelling or gall (fig. 8) is produced by their presence. Those varieties of wheat which have a naturally strong tendency to the deposition of silica and the formation of a hard flinty stalk, have been found to resist the attacks of the fly best, and for the reason that they are better able to resist breaking by the winds. Moreover, tillering well, which is an indication of health and vigor in the plant, may compensate for the injurious effects of the presence of the maggot, when not in overwhelming numbers, and good tillage and careful selection of seed will do much to prevent detrimental attacks of the insect.

The fall deposited egg hatches out a maggot, which makes its way down the stem, and is soon transformed into a dormant larvæ, surrounded by a case formed of the skin, which remains in the position marked at 3, a stem from which the leaves have been stripped, during the winter without undergoing any marked change. This pupa is seen magnified at 5. A magnified dorsal view of the active worm or larva is given at 4, and a lateral view of the same at 6. When spring arrives, the dormant larvæ becomes transformed into pupæ or chrysalides, and after remaining in this position ten or twelve days the pupa-case bursts and the perfect insect emerges, about the time of flowering-time of the early spring flowers.

The larvæ of the Hessian fly have by their capacity to pass into the dormant larvæ condition, a great power to resist extremes of temperature and atmospheric changes during the winter. How they resist like other pupa the tendency to freeze during the intense cold of our northern winters, is a mystery; but that they do so may be determined by examining the partially developed pupa which will be found flexible, as is the case with the pupa of some other insects which have been found unfrozen, although the temperature had sunk to many degrees below the freezing point.

The progeny of the fall fly which have passed the winter in repose upon the stalks of the wheat, in the spring become developed into the perfect insect state, and then make a new deposit of eggs upon the same stalk which gave them lodgment during the winter, or neighboring ones, but upon leaves a little higher up, as the radial leaves are now more or less withered. The worm hatches, makes its way to the base of the leaf of the first or second joint, where it does not so greatly injure the plant but that it may become well developed, but a slight swelling usually points out its place of rest. Commonly, however, the stalk bends or breaks, and gives a badly infected field an appearance as though a herd of cattle had run through it. The worm attains its growth about the first of June, becomes a pupa, and undergoes its transformation to the perfect state and emerges a complete fly during the last of July or first of August, to recommence its depredations upon the fall wheat.

[From the London Vetenarian.

A Famous Arabian Horse.

The Favorite Charger of the late Maharajah Runjeet Sing.

CABOUTERAH, grey stallion, fourteen hands one inch high, Dhunnee breed, supposed to be thirty-five years of age, formerly the property of Maharajah Runjeet Sing, and now in the stables of the Maharajah of Puttecallah, is an active, well proportioned horse, with a good wiry leg, short in the cannon bone, rather full in the hocks (but considering his great age, and that his powers for the last eighteen years have been overtaxed as a stallion, the wonder is how his hocks have remained so sound.) Very broad under the hock, showing great power, well-loined, broad-chested, has a long neck and tremendous crest, sloping shoulders, but too thick for our ideas of symmetry, a Roman nose, large prominent eyes, very pricked ears, has a beautiful temper, is very impetuous, but without any vice.

Cabouterah, to a Sikh, is the very perfection of a horse, and derives his name from his carriage being supposed to resemble that of a Pigeon—"Cabouter."

The real "Dhunnee breed" is now almost extinct. Formerly, this description of horse was much sought after by all the Punjaub chieftains, and some of the breed found their way into the ranks of our cavalry, but the breed has received no encouragement of late years, and I am fortunate in having inspected a horse supposed to be a first rate specimen.

The horse is now as fat as possible, and is fed on 2½ lbs. sugar, 2½ lbs. fine flour (Maidah,) 1½ lbs. clarified butter (Ghee,) besides sweetmeats of all sorts. He can neither eat grain nor grass.

I saw several mares in foal by him, and I bought some of his produce for dragoon remounts, but he is now very uncertain as a foal-getter.

Cabouterah is an enormous favorite with the Sikhs, who treat him with the greatest kindness, and are loud in his praise. The horse will put back his ears, champ his bit, lash his tail, paw the ground, and show every symptom of rage, and in this state rush open-mouthed at any one calling his name, but upon reaching them, he stands to be patted until some one else attracts his attention.

After the death of Runjeet Sing, the horse was sent to the Temple of Ulnritza, as a present to one of the priests who attended the devotions of the Maharajah.

This "gooroo," or priest, passed through Puttecallah on his way to visit the holy river Ganges. The father of the present Maharajah of Puttecallah gave the gooroo many valuable presents, and took possession of Cabouterah, where he has remained ever since, serving mares at Puttecallah.

I consider this horse's age to be fully thirty-five years. It is eighteen years since the death of Runjeet Sing, and the Maharajah of Puttecallah informed me that the horse was very old when he came into the possession of his father, and when a native allows a horse to be aged, he must be very, very old. W. C. MacDougall,

Lieut., H. E. I. C. Stud Department.

Sheep Husbandry.

How to Organize a Flock of Good Sheep.

Editor Ohio Cultivator:—The season for out-door work being about over, and the time here at which farmers are making their arrangements for the winter management of their stock, etc., and having some little leisure, I will commence redeeming the pledge I made you at our county fair, by writing for your paper occasionally an article on the subject of sheep. What I say will be mainly my own experience, having paid considerable attention to the management of sheep for the ten years last past. My flock has averaged about seven hundred, sometimes having more, sometimes not so many; always making it an object to keep the flock, in numbers, proportionate to the feed on the farm. Have now about six hundred and fifty, having sold recently about what was equal to the last year's increase, say one hundred and seventy. Raise annually from one hundred and fifty to two hundred lambs, and dispose of about a corresponding number of sheep during the year.

I think the character of a flock depends very much on the practice of the owner in making sales. Care in breeding is of course of the very first importance, but this, without proper management in the sale of a surplus stock, very often leaves the owner with a flock that is not as in all respects it should be. My rule is, never to suffer a purchaser to pick my flock, always doing the picking myself. Want to pick when I buy—will pick when I sell. Ewes we always sell in the fall—selecting for that purpose first such as are getting a little old, next such as are in any particular defective. By this means our flock of ewes is always right, and looking right. Never suffer a sheep to get old on the farm, unless perhaps a very choice buck or breeding ewe. Never suffer a ewe to have a lamb until she is at least three years old. This for two reasons—first, it injures the sheep; next, generally young ewes are poor nurses, and cause a great deal of trouble to the shepherd. This is especially the case with fine sheep. In the sale of wethers, we are governed by circumstances. Pasture scarce, we sell in the spring after clipping. Pasture plenty, and winter feed scarce, we sell in the fall. Pasture and feed abundant, and we fatten for the drovers or butchers in March or April—never permitting wethers to get over five years old before selling them. By these means, the flock is made always to consist of young, healthy and thrifty sheep. Better that old sheep should be sold at half their value, than good young thrifty ones at a fair price. Feed for this winter being a little scarce, we have sold all our wethers over three years old, and now the number of our sheep being proportionate to the feed on hand, we are preparing the flock for winter quarters. Our breeding ewes are selected and in a flock by themselves. This week they will be subdivided into flocks of not over fifty, and with each flock will be put a buck—selecting of course the best bucks, and the ewes with reference to the buck. This brings the lambs the latter part of April and first of May—which for many reasons I consider the best time.

Next are our last spring lambs divided into flocks with reference to age, sex and condition—never over one hundred together, usually about eighty. Next is what we call our stock sheep, consisting of ewes and wethers not under one and not over three years old. This flock now consists of over two hundred, but so soon as we commence to feed, will be also subdivided according to size and condition—bucks of course in a flock by themselves. The sheep are now in their respective stables at night, and will also begin to feed in a few days. One of the most important items in the management of sheep, is to have them go into winter quarters in good and healthy condition. By paying strict attention to this, we have not of late years lost over one or two per cent during the year.

Stark county has reason to be proud of the numerous flocks of fine sheep within her limits. Our wool growers are among the oldest and most successful in the State, all anxious to excel in the character of their flocks. Prominent among them are Messrs. Hildenbrand, McDowel, Everhard, Ruthrauff and others. Our flocks consist mainly of the old Dickinson Merinos. Recently quite a number of French and Spanish sheep have been introduced here from Vermont. Among others of our wool growers, I am testing the relative merits of each variety, breeding the French pure, the Spanish pure, and the old Merinos pure, and also crossing each class with every other, all the time having an eye to that which will bring the most in dollars and cents: profit, in this as in every other business, being the principal object.

I will write you again soon, giving a description of my sheep barn, and our method of feeding. S. Lahm.

Canton, Nov. 15, 1858.

☞ We take especial pleasure in presenting Gen. Lahm to the readers of the *Ohio Cultivator*. A man who has succeeded as well as he has in this branch of business as well as others, can certainly tell how it was done, and these are the persons above all others that we desire should write for the Cultivator family.—Ed.

Trial of the Steam Plow in Illinois.

At the trial set for steam plows at Decatur, on the 10th of November, Mr. Fawkes was the only competitor—the other machines failed to report. We understand that the machine made at Dayton, for which much was promised, turned out like the one made at Newark,—just able to traverse on a good highway without any plows. The same is the case with an engine lately made at Hamilton, C. W. At the Decatur trial, the grass was wet, and the driving wheels slipped on the turf without advancing. Some plowing was done and some was not done. The week before this trial came off, the editor of *Emery's Journal*, indulged in the following brace of paragraphs:

Col. Harris Indicted.—At the late Illinois State Fair, a steam traction engine was exhibited and adjudged to be capable of drawing six common plows, which it did in soft land, but the working proved defective, and the machine was consigned to the shop for amendment.—*Ohio Cultivator.*

Now Col., because you are a disbeliever, there is no use in your telling such stories. The engine demonstrated its capacity to draw six plows, "which it did" (*not* in soft land) in land as hard as a brick. The working *did not* prove defective, but was as well done as any of your Buckeye plow teams could have done it. You ought to visit Illinois and get your eyes opened, Colonel!—*Emery's Journal.*

The week after the trial we find in that paper the following resolutions of the Executive Board of the Illinois State Ag Society:

Resolved, That having witnessed the performance of J. W. Fawkes' "Steam Plow," we deem it our duty to record our opinion, that this ingenious machine is well adapted as a stationary engine for farm purposes, and that with improvements it can be made useful for plowing on our praries; but that it is not as yet such a machine as will entitle it to the premium offered by this society.

Will Bro. Bragdon put that and that together, and "wait for the facts" before he puts his foot in next time? Who's convicted?

Jefferson County.—We have never before known such a scarcity of fruit and vegetables, and many a good housewife looks care-worn and perplexed when thinking how she shall make up a respectable variety in her meals. A large portion of our corn is housed, and we shall have as much sound corn as last year, though not so many bushels. The only heavy crop of the season is hay, which is extra in quality; and stock having done well on grass, will keep pretty comfortable on it without much grain. Our farmers will therefore look stern winter in the face with a reasonable degree of composure, and look forward with hope to the seasons of 1859. Jas. D. Ladd.

Sandy Soils, Coarse and Fine.

At a recent meeting of the Farmer's Club held at the American Institute, an essay on soils was presented by Prof. S. W. Johnson, of Yale College, in which he says: The labors of chemists to discover positively all the causes of the fertility of soils have not yet met with conclusive success. The mechanical structure of soils is of primary importance. Naked rock grows lichen—the same rock crushed into coarse grains, grows a much higher order of vegetable—pulverized fine, the cereals grow in it. Geology, chemistry, botany, physiology, meteorology, mechanics, hydrodynamics, heat, light and electricity, are all intimately combined in the grand process of vegetation. There are sandy soils in our Eastern States, which, without manure, yield meagre crops of rye and buckwheat; but there are sandy soils in Ohio, which, without manure, yield on an average eighty bushels of Indian corn an acre, and have yielded it for twenty to fifty years in unbroken succession, the ingredients of these soils being, by chemical analysis, the same. At present no difference is known between them, except the coarseness of the particles—the first being coarse, while the Ohio sand is an exceedingly fine powder. The power of soils to attract and imbibe moisture and oxygen was well shown by Schubler, of Hoffen, 40 years ago. Of 13 different soils quartz sand absorbed in thirty days over 1-1000 parts of oxygen and no moisture, while humus absorbed 13 of oxygen and 120 of moisture.

Miami County.—Corn turns out from one to fifty bushels per acre, according to the locality. There is more sound corn in the Miami valley this year than last, though the whole crop this year lacks full one-third of last year's crop, good and bad. Wheat looks only tolerably well, owing to the drouth about seeding time. Many farmers hereabouts were obliged to sow their fields a second time, the first sowing having failed to come up. This should be another spur to our farmers to *underdrain*, which would take advantage of drouth. The wheat, upon being threshed, produces only from one-half to two-thirds of a crop, according to the straw, except the early sowing which is much better. Early planted potatoes produced little or nothing. Late planting made an average crop. Col., there is one point in regard to this underdraining, upon which some of us farmers who own high, and moderately rolling land, would like a bit of advice, and the more particularly so, as most, if not all the experiments we have heard from, have been on wet, mucky, or black soils. The question with us is, Will it pay to underdrain rolling clay land, with a stiff clay subsoil? N. H. A.

West Charleston, Nov., 1858.

Answer.—In the way that Judge Kinsman proposes in the O. Cult., Nov. 1, we should say, yes.—Ed.

For the Ohio Cultivator.

Antiquity of Short-Horn Race of Cattle.

One of your correspondents has questioned the correctness of an observation incidentally made by me in your journal of Sept. 1st, denying that the brothers Colling had originated a new breed of cattle called the "Improved Short-horns." Mr. Robert Colling, who was a most capital breeder, never, so far as I can learn, claimed more than to have selected the best animals within his reach of Short-horn breed, and by good care and judicious breeding, to have established a herd of that celebrated race of animals, equal certainly, if not superior, to any of his cotemporaries.

But Charles Colling was altogether a different sort of man. He was an experimenter, though not to the extent that he was willing to have the public believe. He was a shrewd man, and calculating upon the avidity with which men run after new things, endeavored to create the impression that his cattle were not only superior to all others, but were in fact of a different breed—a breed that he, by some superior system of crossing, had created! How this had been accomplished he would never disclose, supposing that the more mystery he could throw around his system, the greater would be his success. When he disposed of an animal, he gave no pedigree—it was enough for the public to know that it was of the *Colling breed.*

I propose now very briefly to call attention to a few of the well known facts to be found in most standard histories of the Short-horn cattle, which establish the antiquity of the breed. I do this, not so much in justification of the real merits of these cattle, as to counteract the erroneous idea that is constantly urged upon the public, that new breeds of animals may be created within a few years, of almost any desired quality and conformation! The promulgation of a doctrine like this, if it be erroneous, must of course result in serious loss and disappointment to all stock breeders who act upon it. I ask the reader's attention to the peculiar form this argument is made to assume. To prove that new breeds can be created, we are referred to the Short-horns, whose brilliant colors and large, symmetrical and well developed carcases, make them, as even their enemies admit, the most imposing of all breeds. We are then told these cattle were not known before the days of Mr. Colling. He "got them up," and he was but a short time doing it. He began about 1785, and by 1800 say, in fifteen years, the work was accomplished; in 1810, he sold out and quit!

Now, if a breed of cattle possessing the shape, size, quality, and the surprising early maturity of the Short-horns, can be "got up" by one man in this brief period, by crossing what we are told was a large boned, coarse, slow-feeding breed, upon the *black* polled cattle of Gallaway, it is impossible for any man to set bounds to the further improvements that we may expect in this department. There is, however, one thing lacking—neither Mr. Colling nor any of his partizans or admirers, have ever informed us *how* the thing is to be done. He used, we are told, two bad breeds, or at least, two breeds that had no particular merit, but many very bad characteristics, all which some how (we still can't see *how*) were immediately "bred out," the perfection of excellence taking their place!

We can very well understand how a bad breed may be to some extent, at least temporarily, improved by crossing with a better one, but how the descendants of the two should be better than the best of the originals, we cannot so well comprehend. The Gallaways, we are told, were generally black—"a few are of a dark brindle, and some of them are of a dun or drab color." It is a little difficult to understand how, if Mr. Colling "dipped" into this breed enough to *improve* the Teeswaters, he bred out these "prevailing" colors so quick.

Soon after Mr. Colling commenced his career as a breeder, he procured by purchase, four cows that were equal at least, if not superior, to any he ever bred. These were Lady Maynard, the Duchess from Stanwix, Daisy, and old Haughton. The thorough-bred Short-horn bull Hubback, (319) bred by Mr. Hunter, was certainly as celebrated as any bull Mr. Colling ever owned of his own breeding.

We have the authority of a former Editor of the American Agriculturist, who derived his information from the old breeders in England, for the fact "that it was conceded by a company of old breeders in 1812, in discussing the improvement of Short-horns, that no stock of Mr. Colling's ever equalled Lady Maynard," and that "Mr. Colling has repeatedly said that he never had so good an animal out of the Stanwix cow as she herself, though bred to his best bulls."

The celebrated English breeder, Thomas Bates of Kirkleavington, in a letter relating to the Duchess tribe of Short-horns, says: "Mr. Colling repeatedly assured me that she" (his original Duchess from Stanwix) "was the best cow he ever had, or ever saw."

I think no one will question the fact that the cows above mentioned and the bull Hubback, were at least equal to anything Mr. Colling ever bred; and if this be so, how can it be said that he has so improved the Short-horns as to make them a new or different breed?

I quote now from Mr. Berry's account, who wrote, as I have before said, as a partizan, and who at the time (though your printer made me say otherwise) owned some of Mr. Colling's Gallaway "*improved*" stock. He says that "more than a hundred years ago, which would be before 1724, on the banks of the river Tees there "existed a breed of cattle, for a description of which the author is indebted to an old and celebrated breeder now living, in color resembling what *is called* the improved breed of the present day, except that the fashionable roan was not quite so prevalent; they are described *in general character* also, as differing very little from their descendants, possessing a fine mellow touch, good hair, light of-

fal, particularly wide carcases," * * "resembling thus closely their descendants of the present day. One trifling difference *alone*, worth recording—the horns of the old Teeswater breed were rather *longer, and turned gaily upwards.*"

We are informed by the Editor of the Agriculturist, (1842,) that "the Smithsons of Stanwix, (where Mr. Colling got his Duchess) bred good Short-horns two centuries ago." And the Editor of the Herd Book informs us, that the same gentleman, in a private conversation, told him that he was informed while in Durham, that an ancient record now in that county, showed the Short-horns as existing there in great excellence four hundred years ago.

Mr. Ambrose Stevens, in his edition of Youatt's work, states a fact which proves beyond cavil, that the Short-horns existed in the valley of the Tees River as early as the year 1300! He says: "There is a cow sculptured on the west corner tower of the eastern transept of the cathedral of the city of Durham, commemorating a tradition as to the cathedral, *and in every respect the effigy presents a Short-horned cow.*" This transept was begun to be built in the year 1235, and was finished by Prior Hotoun about 1300, he dying in 1308." BUCKEYE.

Correction.—In article in Cultivator of Nov. 1st, page 324, 2d column, at the close of the quotation from Youatt, before the words "and the last rib" add "there was too much space between the hip bones." In 22d line from bottom, for comparison read *conformation*. On page 325, 11th line from top, for expression read *confession*. And in 5th line of 2d paragraph, for Durham read *Devon*.

For the Ohio Cultivator.

Chapter of Sundries.

Elder Berries — Quaker Discipline — Cut Corn Fodder — Crops.

Friend Micajah's excuse for the elder bushes is very satisfactory, as they grow there only on the limestone dykes and other unplowable waste places in his vicinity. Our elder berry farmers used to allow the bushes to invade their arable fields most sadly; and as these slovenly men had sold out and gone West, when I read Micajah's story I feared that some of them had set down at Short Creek! But the quiet way in which he took my criticism, leads me to believe that he knows something of the New England Quaker meetings for discipline, else he would have flared up, instead of quietly saying "A little drubbing will not hurt the best of us."

But apropos of the Quaker discipline. I was often when a boy compelled against my will to attend those meetings for business, to very little profit perhaps for the time, but like "bread cast upon the waters," the lessons I then learned I have often applied in my after intercourse with the world, to no little profit. No question there is decided by arbitrary vote—unity, often brought about by cross-bearing Christian humility and forbearance on the part of the minority, must be gained before a question can be decided and passed upon there.

Once in a New York yearly meeting, a fiery young Friend got up in his place and advocated the disuse of the written discipline of the Society, quoting St. Paul, to prove that "the letter killeth, while the spirit giveth life;" then an ancient Newport Friend got up and quietly asked, "Does the Friend mean to say that the discipline killeth?" Not another word on that subject was uttered at that meeting.

Often when I have seen man or woman full of wrath and in the plethora of the war spirit, at some real or imaginary wrong done them by a neighbor, I have endeavored to impress them that the true course was to return good for evil; when I have signally failed to succeed, I could but feel that had they been early trained in that discipline which is founded on Christ's Gospel, they would not have been thus obdurate.

The Ohio Dent Corn.—Some of the Ohio farmers might learn a lesson from our amateur farmer, Jos. Wright. He has a machine for cutting up the large stalks, and his fine milch cows are now luxuriating on rations of cut corn stalks, as full of liquid sugar as the Sorghum itself. Yet every one of those stalks has produced one, and some of them two large ears. I counted over 800 kernels on one ear. These stalks are kept in large shocks in the field, from whence they are hauled to the stable, cut up and fed through fall and early winter, before the stalks have lost their juices. But such corn as this can only be grown here on well drained and well manured fields.

Root Growing.—Indian corn for man or beast, is a more profitable crop than Beets or Ruta Bagas. But after the first application of manure, roots require very little for another crop, because they draw much plant food from the atmosphere; but corn is a grosser feeder, requiring large applications of strong nitrogenous manures for every maximum crop; yet such a crop will grow without manure on a soil that has produced a very large crop of beets, because the beets used the soil without exhausting it.

Crops in Western N. Y.—We have had extra large crops this season, particularly hay, corn, oats and potatoes, while the little wheat sown has produced a better quality of grain, and much more of it than usual. Much of this is due to the favorable season, but not a little to tile underdrains and better tillage. Many farmers who used to think with Sancho that sleep was a great invention, now break off sleeping on leisure days, to go to ditching. S. W.

Waterloo, N. Y., Nov. 8, 1858.

☞When a stranger treats me with want of respect, said a philosophic poor man, I comfort myself with the reflection that it is not myself he slights, but my old shabby coat and hat, which, to say the truth, have no particular claim to admiration. So if my hat and coat choose to fret about it, let them, but it is nothing to me.

The Editor's Table.

One more Number closes up this year's volume of the *Ohio Cultivator*. Whatever our friends propose to do towards enlarging our field of usefulness, should be set about immediately, so that all may begin together with the new year.

Mechanics at the State Fair.—Some dissatisfaction has been expressed, to the effect that the Mechanical Department of our State Fairs has not received the attention it merits, and more particularly that awards have been made on very important implements, by incompetent judges, without any adequate trial. We feel the force of these strictures, and believe the State Board take the same view of the matter in some things, and that the cause of complaint has not arisen so much from any design on the part of the State Board, as from an omission which they are willing to rectify. We presume the question will be discussed at the annual meeting on the 8th of December.

Seed Stocks.—Lay in the seeds for next year's planting. If it is not already done, select the ripest and purest corn in the ear, and store it in a dry place. The question of seed oats for next year will be a serious matter, since but little of this year's crop is fit for hogs, much less for seed. The scarcity of potatoes in some places will be a great temptation for people to save refuse stuff for seed, since the best are not very good. Along the Railroads we can get plenty of fair potatoes from the north for about 75 cents a bushel.

Surface Draining Plow.—A. P. Routt of Somerset, Va., has perfected a surface draining plow, which must be a good thing to use on all fields after having been sown to winter grains, and also for Spring crops and other purposes where surface drains are desirable. The plow is so constructed as to make a smooth double furrow, leaving the earth compacted to prevent its falling in. It consists of a wooden frame like that of a shovel plow. On the shank is a double mold-board plow with extension wings; before this is a coulter with the upper end running through the beam and the bottom riveted in a shoe bar connected with the point of the plow. After the plow follows a cast iron parabolic roller of the shape to fit the furrow, which presses the whole surface, leaving a nice smooth gutter, about a foot deep, 30 inches wide at top and 4 inches at bottom, the whole being completed at one passing of the plow. See advertisement.

The Cosmopolitan Art Association is doing a good thing. The Quarterly Journal has been bro't up to a standard of excellence that makes it worthy the name, and worth more than the price. The splendid engraving of the Village Blacksmith is a receipt in full for the price of subscription. Mr. Derby gives every subscriber more than his money's worth, aside from a chance in the drawing. See advertisement.

J. A. Borst, of Wadsworth, Medina Co., though not an old man, is a veteran in the work of public rural improvement. He now proposes to enter the field as a Horticultural Missionary, for the purpose of supplying his region of country with choice and reliable fruit trees. His mission is a good one, and we hope he will also reap his reward.

The Gate advertised by J. A. Treat, we saw in operation at the Summit Co. Fair, and believe it is a good thing. It is a vertical gate, operated by a counter-balance on the heel, and has very little rigging to get out of order.

Facts and Figures about Mining.

The writer of the following article on the mineral development of Ohio, has been for twenty years a citizen of the State. His duties had called him to explore and examine the mineral resources of a large portion of the territory of the U. S., and foreseeing the future advantages of Ohio from her position, from her mineral resources, her rich soil, her water communications, natural and artificial, the cheapness and ease with which railroads could be constructed, even in the most hilly parts of the mineral as well as the agricultural districts, he made his home in the hills and among the mines of Ohio. He has devoted twenty years of his life to examine the resources of Ohio, and has aided more or less in the development of the resources he has witnessed. He has studied the present and future development, not only as a geologist and mining and civil engineer, but as one who sees in the future development the harmonious progress of all the industrial pursuits.—Ed.

MINERAL DEVELOPMENT IN OHIO.

Written for the Ohio Cultivator, by Prof. W. W. Mather.

The general geology of Ohio, and the outline limits of the rock formations are well known to a few. The geological map of Ohio and the outline of its geology published in the Agricultural Report of 1857, will make them known to a great number. The reports of the geological survey

under direction of the writer of this article, commenced in 1837, and prosecuted that and the following year, are now inaccessible except to the few who have preserved them, and in the legislative documents of those years. The great outlines of the rock formations were then ascertained, and the detailed surveys of a few counties were approximately completed.

Ohio has made great progress in productive industry of every kind, in agriculture, in commerce, in manufactures, in mining and facilities for transportation, since that time. Her manufactures have been mainly dependent on the developement of the coal and iron interests, and increased facilities for transportation, combined with increased capital and population. In one of the counties* in which detailed surveys were then made, 15 iron smelting furnaces have been erected since that time within its then territory, and successfully worked.

In 1838, the iron furnaces were mainly in Lawrence and Scioto counties. Now there are 15 in Lawrence Co., 13 in Jackson, 9 in Scioto, 5 in Vinton, 1 in Gallia, 2 in Athens, 3 in Hocking, between Logan on the Hocking and Ironton on the Ohio, or 48 furnaces in the south part of the State. In 1838, there were 9 in Lawrence, 5 in Scioto, and 1 in Jackson county. Thirty-three furnaces have been built and worked in that part of Ohio since 1838.

There are also 15 furnaces from the middle to the N. E. part of the State, nearly all of which are stone coal furnaces, and erected since 1838, viz: 3 in Clark, 6 in Mahoning, 1 in Portage, 1 in Tuscarawas, 1 in Jefferson, 1 in Columbiana, 1 in Lake, and 1 in Cuyahoga. The charcoal furnaces that were formerly worked from Licking Co. northward, are all, it is believed, out of blast from want of charcoal.

The production of iron in Ohio has increased from 20,000 tons in 1838, to 106,000 tons in 1857.† In the 2d Geological Report of Ohio, 1838, it was estimated that the production of iron in the United States would in 25 years reach the then production of Great Britain, or 1,000,000 tons. It has reached that amount in less than 20 years. Ohio is the second iron-producing State in the Union, Pennsylvania being the first. The great development of iron production in Pennsylvania has been by the use of mineral coal. Most of the furnaces of Northern Ohio, perhaps all, are stone coal furnaces. Several in the southern part of Ohio use the same combustible successfully, making good iron. This business is destined to increase greatly in Ohio, throughout the iron belt, where coal, ore and limestone are almost universally found in the same hills. The charcoal furnaces of Southern Ohio usually have 5,000 to 10,000 acres of land attached to them, with a view to a perpetual supply of charcoal. Stone coal furnaces require but little land, and consequently but a small investment in real estate. Each of these charcoal furnace tracts of land, is capable of availibility for numerous stone coal furnaces.

The coal production of Ohio in 1838, was about 1,400,000 bushels, or 5,600 tons.‡ In 1857, the sixteen exporting counties produced 46,100,910 bushels, equal to 1,744,036 tons.‖ The entire amount of coal mined in thirty counties in Ohio in 1857, including the sixteen coal exporting counties, is estimated from data deemed approximately correct, at 59,860,000 bushels, or 2,394,400 tons. The entire amount consumed in Ohio, and shipped from Cleveland, including the imports into Ohio from Pa., and a little from Va. and Ky., is estimated at abont 66,600,000 bushels, or 2,664,000 tons.

Salt, coal-oils, fire-brick, pottery, gypsum, lime, cement, and superior building stones of various kinds, are additional articles already largely produced in Ohio, and the production is destined to a rapid and great increase.

Ohio has made such progress in all industrial pursuits, as to render it important that the local geological and mineral resources of her territory should be made known to the public. She was among the first to pass a law to effect this object, and great benefits have accrued from the investigations made in the counties examined. A bill for the resumption of the survey received a majority of the votes of the Legislature, but not a constitutional majority, and failed to become a law. All the sister States have had surveys made, or such surveys are in progress.

Ohio, although first in agriculture, and only second in coal and iron production, is as yet comparatively unaware of the advantages she possesses in mineral wealth, and in the power of making her resources available for industrial pursuits, and her unequalled advantages for distributing her products to the various marts of the country. She has a rich and productive soil, abundance of cheap food, iron in untold quantities, with a production rapidly increasing both in the raw and the manufactured forms, coal in inexhaustible beds, and of superior qualities for all purposes, and easy of access—and all these elements of manufacturing industry are near each other, cheap, and favorably situated for transportation and distribution to the East and to the West, to the North and the South. The Ohio Coal Field § must necessarily be the great *work shop* for the Mississippi and St. Lawrence Valleys, with their teeming millions of people in the future.

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* Jackson county. Three of the furnaces in Vinton Co. are in what was then a part of Jackson county.

† Commissioner of Statistics' Report, 1857, p. 34.

‡ In 1838, the coal cleared on the Ohio canal was..... 279,699 bu.
Do. on Miami canal, (Youghioghey coal).. 39,250 "
318,949 bu.
The other canals were not then in operation, and the local consumption of the coal districts and export from Pomeroy, may have been 1,100,000 bushels.

‖ Report of the Commissioner of Statistics, p. 34.

§ The Ohio Coal Field occupies a large tract drained by the waters of the Ohio, mostly of the Upper Ohio. The portion in Ohio seems to unite greater advantages than any other.

HORTICULTURAL.

For the Ohio Cultivator.

Winter Protection.

Strawberries are much benefited by slight protection in winter. Even where there is no danger of the plants being killed, they will be found to start earlier and stronger in the spring for being covered. The best material we have found for this purpose, is forest leaves, (which are easily gathered at this season of the year,) spread lightly over the beds, and a few sticks, bean poles or corn stalks laid on top to prevent the leaves being blown away. Litter from the stable may be used in place of leaves, but is liable to scatter many seeds of weeds and grass, making extra labor in weeding the coming summer. Corn stalks alone may be used with good success, taking care not to cover so thickly as to exclude the air.

Raspberries of all foreign kinds need protecting in this climate, to ensure good crops of fruit. First cut away all the old and dead stems, and shorten the others one-fourth to one-third in length; then bend the tops down to the ground, and place a little straw or litter on them, and cover this with earth to hold them down, and throw corn stalks or litter over the whole. Remember it is not so much the *cold* that does the mischief, as the *sun and winds*, and the severe changes that occur in our fickle winter months.

Roses, and other half-hardy shrubs, may be pretected in the same way as recommended for Raspberries; or, for Noisette and China Roses, it is well to bury them with earth, six or eight inches deep, and in the spring cut off the tops as far as killed, letting them spront afresh from below.

Asparagus and rhubarb beds should be covered with manure, part of which may be raked off in spring, and the remainder spaded in. B.

For the Ohio Cultivator.

Flowering House Plants in Winter.

Bring Hyacinths to the light, to get them ready in bloom by Christmas. If you have bulbs in glasses, change the water every week, but be careful not to misplace or break any of the roots. If they are in pots, give them a little water when taken from the cellar; or if you had them buried, as directed in Nov. 1st, supply them more liberally as they advance in growth. It is often desired to have Hyacinths grow taller than they are disposed to do before flowering, which you can easily do after they begin to grow. A good bulb will grow its leaf two or three inches before the flower shows itself, but to make them grow taller with the leaves, take a paper 6 or 8 inches wide, coil it around the leaves, and let the top be open to admit light: this will draw them up.

Watch the green fly on Geraniums, Roses, Cinerarias, and fumigate with tobacco at an early season, before they ruin your plants. Roses grown in pots often get the white scale louse: wash them with tobacco lye, which you get strongest by boiling the tobacco. For Camelias, wash the leaves clean, and keep them in a cool room, set near the light; water freely if they come into bloom, and syringe the tops. Transplant Chinese Primroses, which will pay you with flowers all through the winter.

Having now Chrysanthemums in bloom, and Roses, Primroses, (Chinese,) Camelias, Azaleas, a few Hyacinths and Tulips, with some Rose Geraniums and a Stevia, you can decorate your flower stand for three months with flowering plants and fragrant foliage. J. L. STELZIG.

Evergreen Trees about Dwellings.

At this season of the year, when most of the trees are bare of leaves, it is a relief to look upon the bright foliage of the Evergreens. There is a great choice, even among the Evergreens, and those are to be most esteemed which carry the liveliest color in the winter. In summer time there are greens in plenty. For both summer and winter, it is desirable to have for shrubbery about the house a handsome variety with a fine foliage, which gives the landscape a civilized look, in harmony with handsome children, silky little pet dogs, rabbits, etc.

THE AMERICAN ARBOR VITÆ.

The Arbor Vitæ tribe of Evergreens afford a beautiful variety, and are particularly available in filling little interstices about the door-yard or larger lawns and parks. The American Arbor Vitœ, sometimes

erroneously called white cedar, is a hardy and handsome shrub, and easily attainable from any well stocked nursery.

THE SIBERIAN ARBOR VITÆ.

The Siberian Arbor Vitæ is of more recent introduction into this country, and from its compact, pyramidal form, bright foliage in winter, and hardiness, is likely to become the favorite of this class of Evergreens. The beauty of all Evergreens is to grow broad and low at the base, and of a perfect pyramidal form, and we consider it very bad taste to trim them in fantastic shapes, as we often see done in the country.

For the Ohio Cultivator.

Fruit Culture for the Million.

A HAND BOOK OF FRUIT CULTURE, is the title of a little work recently published by FOWLER & WELLS, New York. It is designed to supply the demand that exists for a cheap and popular work, adapted to the wants of the million who desire to plant and cultivate fruits, but are conscious of a lack of kowledge on the subject. The aim of the work is a commendable one, and its mechanical execution creditable to the publishers. It contains in small space a vast amount of information compiled from various sources, and calculated to be of much service to the public, so that as a whole the book is a good one, and well worth its cost (only 30 cts.) to purchasers. At the same time it is to be regretted that the compiler (Thomas Gregg) had not possessed more particular knowledge respecting fruits and fruit culture in the different States and sections of our country, before he undertook the compilation of a work of this kind, designed for the whole Union. It is quite probable, however, that if he had possessed the requisite knowledge for the proper performance of the task, he would have shrunk from the undertaking, as he would then have had a better conception of the difficulty, if not impossibility, of compiling or writing a book on fruit culture for general circulation and of small cost, that should give reliable instruction adapted to most parts of our widely extended country, with its greatly diversified circumstances of soil, climate, etc.

Mr. Gregg is said to have formerly resided for some time in one of the Western States, and had some experience in fruit growing; he also has endeavored to do justice to Western readers, by giving extracts from Western writers on pomology, reports of Societies, etc.; but these are in most cases so brief and disjointed, and in some cases so unreliable and contradictory, as only to confuse or mislead the mind of the reader. This is especially true in the matter of the selection of varieties of fruit for the Western country—in regard to which there is at this time the most need of information. In his list of apples, for instance, he cumbers his pages with descriptions of some varieties that are unknown and untested generally throughout the country, *and but little approved, if not condemned, where best known*—while many others of the highest value, especially for the West, are not described at all. The chapter on cherries, also, is quite defective, in that it does not indicate which varieties are adapted to Western soil and climate. With all its faults, however, the book, as before stated, is on the whole a good one, and as good as we are likely to have of the kind; but we still need, and must have, books on fruit culture written expressly for each separate State or section of country. B.

For the Ohio Cultivator.

Trouble among the Fruit Trees.

Having been through much of the western portion of Ohio during the latter part of the past summer, I found in every locality which I have been in, that the fruit trees, and more especially the apple, are apparently on the decline. It is not confined to any particular age or size, but trees of all ages and sizes are alike indiscriminately affected.

Many farmers with whom I conversed in different localities in regard to this subject, informed me that their orchards last year were in the most flourishing condition, and yielded abundant crops of fruit of more than usually large size, but found none who could give a satisfactory reason for the present condition of their trees.

The leaves are not more than half their ordinary size, curled and crisped, having the appearance of being scorched by excessive heat, and every way being indicative of rapid decay.

For information, Mr. Editor, your attention is directed to this subject. H. M.

Darke Co., O., Nov., 1858.

☞ Our attention has been pretty well "directed to this subject" all the season, and our orchard correspondents are still at a loss as to the real cause, and still more so as to any effectual remedy. Let us keep on with our observations, and report progress.

There is a purple half to the grape, a mellow and crimson half to the peach, a sunny half to the globe, and a better half to man.

Culture and Training of the Grape.

How the Doctors Agree, and how they Disagree.

At a late meeting of the Cincinnati Horticultural Society, the following from the report of a committee appointed to investigate the cause and extent of the failure of the Grape crop, was read by Mr. Mullett:

From observations made and information gathered, I should judge that the deficiency this year in Hamilton county alone, will fall little short of half a million of dollars, and a large portion of this falls upon and is severely felt by those industrious Germans, who at an immense amount of toil have trenched their 3, 5 or 10 acres, and now suffer the failure of their expected reward.

Do not vine-dressers forget by their mode of pruning, that they are causing a disarrangement in the relative proportion that the roots and branches naturally have to each other, by the immense cutting and hewing of the vine annually, now miscalled pruning?

One vineyard that I visited, with a southern aspect, clay subsoil, no stone for ten or twelve feet, vines four feet each way, double trenched, produced not one-sixth of a crop. The first row of vines about six feet from the house, a year ago last spring he made into an arbor, to protect the house from the sun. He let the vines grow with as much wood as possible, to shade his window, and to his surprise he got a heavy crop of grapes —but the vineyard only about one-third. This year he has made an arbor three parts round his vineyard, and had half a crop on the arbor, and one-sixth in the vineyard. He intends to take up two vines and leave one through his vineyard, and leave the one to supply the place and canes of three. He further remarks that short pruning forces too much sap in the wood from the excess of roots in comparison with the vine; that the canes do not ripen as well, especially on old vines, and is more liable to be injured by severe frosts, and that the bud is started too early in spring. Before he built his new house, he had a Catawba vine that matured over 350 bunches.

Another German who has between four and five acres, has nearly as many grapes on about three hundred feet of arbor and trellis and two vines on his house, as he has in the whole of the balance of his vineyard.

I visited a large portion of the White Oak settlement, and in that district the grape crop is a complete failure. One place I observed some vines had run up some cherry trees, and that they were loaded with grapes. Under pretense of getting a glass of wine, I went into his house. He said he was quite sold out; he had not over one-sixth of a crop last year—this year it was not worth gathering. He said he was about to plant fruit trees and destroy his vineyard. I advised him to try another mode of pruning, and pointed to those in the trees as an example. I remarked that there was too much root for the small quantity of wood left on the stakes. He said something to his son in German, and took me to the other side of his house, where he had ten or twelve vines loaded with fruit. In digging a drain for his cellar, he had cut off the roots of one side of the vines, and my remarks of too large a quantity of roots for the small quantity of vine, led him to see the effects of root pruning. He had cut off one-half of the vines and one-half of the roots, and thus he had preserved an equal balance of the vegetative powers of the vines. And thus he illustrated (although accidentally) the sure principle of vegetable physiology, and proved that a vast deal of labor is annually performed on the vine which cannot be called useful or valuable. I will give one other statement. It relates to a vineyard which belongs to a member of this Society. Soil a sandy loam. It was not trenched, but subsoiled by the plow. I think that this is one of the best and most judicious planted vineyards that I have met with. His vines are planted wider apart than usual, and every five or six rows he leaves an extra space, wide enough for a wagon to pass whenever required. He says it is a great labor-saving plan, and it more than doubles the rent of the extra land, besides giving the vines a greater supply of sun and air. He has never lost a crop until this year, and then his grapes were as large as peas, when there came some heavy rain and very hot weather with showers. His vine-dresser was sick at the time, and he considers that he lost his crop for the want of plowing at that particular time.

Mr. Buchanan related some facts in his own experience relating to the culture of the grape in his vicinity. Mr. B. stated that the spear and bow system have produced fair crops with him—that arbors which showed beautiful prospects were all swept off by the mildew and rot—those vines which were trained against the house and board fences had escaped; he had trained some long this year, and the rot and mildew followed; three or four systems were tried, but bad effects followed them all; some vines had been summer-pruned and some not—all with no better effects. In all limestone formations there had been the same disasters. On sandstone foundations crops had been mostly saved. Mr. B. considered atmospheric causes to be the great origin of the difficulty of rot and mildew. This was the first year after twelve years cultivation that his vineyard had failed. New vineyards escaped more than old ones. It was the experience of all that, in the third year, the grape produced generally a few bunches; the fourth year a good crop; fifth and sixth years generally a full crop; after that it was more common for mildew to appear, and the vineyard rather deteriorates in general with respect to mildew and rot. Mr. Buchanan's experience is, that the roots of the vine descend five feet in our soils trenched two feet deep, and then mildew commonly followed. The trouble seems in the root chiefly. If the ground were dug five feet deep, he thinks that the roots would descend still deeper in proportion. Both Messrs. Buchanan and Cary agreed that the line above

frost, or *thermal* line, as in the Southern Alleghanies, was a point in cultivation above danger.

Messrs. Howarth, Mullett and others, followed with some remarks, that longer pruning and wider planting would, in some degree, remedy the late difficulties in our grape culture; but all have coincided that the atmosphere with respect to much wet and warmth, or high condition of the temperature, had something to do with it—as with the pear blight, and perhaps potato rot, etc.

Home Miscellany.

School Girls in Winter.

We wrote in the last No. of the Ohio Cultivator about the opening of the winter schools, etc. In continuation of this subject, we wish to put in a special plea for the girls. Make their dresses short enough to swing clear of the snow and mud, and give them good water-proof boots, to wear to school. Yes, we insist upon it—they should have boots. Women's shoes of the present fashion, are no more fit to be put upon country roads in winter, than an Indian's birch bark canoe is fit to cross the Atlantic. Boots will not look quite so trim about the ankle, or step so lightly upon the floor, but they will do what is of more consequence—preserve the health to show off these graces in after life, and to take a great many elastic steps, that otherwise might be fewer and those leading directly down to the grave.

Another thing we are glad to see coming in fashion: the ladies are learning to skate, and for this they must have boots. Now girls, get each of you a pair of neat winter boots, and a pair of skates to fit, and the first ice that forms in your neighborhood, large enough, go out with your brothers or somebody else's brothers, and learn to skate. Be prudent about it, and not overdo the exercise, and you will find it a capital medicine—next to horseback riding.

The only way to bring about a race of healthy women, is to attend to the physical development of the girls before they are diluted in the false system of fashionable accomplishment, that fits them for nothing but elegant imbeciles.

For the Ohio Cultivator.

Stoves and Ventilation.

The use of stoves is becoming every year more general. An old-fashioned fire-place, used to cook by, we presume can scarcely be found among our readers, and indeed we miss their cheerful light and open hospitable looks, in nearly or quite every room in the house.

In the kitchen, we rejoice to know that the labor of the housewife is greatly lessened by the change; but elsewhere, if coal can be had, we should earnestly recommend open fires, as being both more cheerful and more healthful; but it is useless to combat the introduction of stoves, and we shall only seek to draw attention to the means of preventing any evil results from their use.

The *old people* justly complain of rooms heated by stoves, in consequence of the greatly increased *drafts of air* which are noticeable, and they are not alone in observing that the air is generally close and unwholesome, and the feet cold. Indeed, headaches, lassitude and *hard colds* are so very frequent, that we may well inquire whether the close stoves in use have not something to do with them, and whether such results may not be prevented.

With the introduction of stoves, the open fireplaces have been generally closed, and thus a great source of ventilation has been cut off; but in order to have the fire burn, there must be a supply of fresh air, and this is usually furnished by the crevices under and around the doors and windows, and hence the drafts of air. Yet these drafts accomplish little in ventilating rooms, because the currents are in the wrong direction. The out-door air thus coming in, is colder than that in the room, and hence naturally sinks toward the floor. Moreover, as the stove is placed low, the currents in passing from the crevices to the fire, take a downward direction, and hence there is fresh cold air about the feet, where it can do nothing but harm, and the air which is heated and has been breathed over, remains undisturbed about the head, to heat and oppress the brain, and to be still taken into the lungs in place of pure fresh air.

To obviate the latter difficulty, the heated and impure air, which being lighter than the other, rises, should have an exit near the ceiling. A window might be lowered from the top occasionally, or what would be far better, an opening should be made in the chimney near the ceiling, and the heated air would the more readily escape here in consequence of the draft in the chimney. This opening could be temporarily closed at any time, if the fire draft required it. There are ventilators constructed for this purpose, which close themselves when the current of air passing down the chimney causes it to smoke.

Where there is no chimney in the room, a pane of glass might be removed from the upper sash of the windows, and a transom—a board swinging on a pivot at the centre—inserted in its place. This can be opened or closed at pleasure, and has been found to answer the purpose admirably.

The drafts of air from the crevices might be prevented easily by boring a hole in the floor near or under the stove, and inserting a lead pipe, which should open directly under the grate or the flue of the stove, thus constantly furnishing the current of air needed, without taxing more distant crevices. That it would accomplish such object, is evident from the fact that such crevices do not create such drafts except when there is a good fire, requiring fresh air.

A dish of water on the stove, makes the air more moist and healthful, and when it can be done without too much trouble, should always be kept there.

Another suggestion which we think quite important, is this: have the stove placed as near the floor as possible, for hot air will rise, not sink, and the floor about the stove is generally cold. We often see the stove elevated not only on high legs, but on blocks or bricks also, the immediate results of which are three-fold. First, *twice as much fuel* is required, as when it stands nearly or quite on the floor level; secondly, the higher the stove is placed, the more unwholesome the air becomes about the head; while thirdly, the floor is proportionally colder, and from the creeping baby to the aged grandma, all must suffer from cold feet.

We are convinced that were these suggestions carried out, a great deal of poor health would be prevented, and especially that *colds* would be greatly diminished. JOSEPHINE C. BATEHAM.

TO CURE HOARSENESS.—Take the white of two eggs, and beat them with two spoonfulls of white sugar; grate in a little nutmeg, then add a pint of luke warm water. Stir well, and drink often. Repeat the prescription if necessary, and it will cure the most obstinate case in a short time.

For the Ohio Cultivator.

BABY ALICE.

Two little light feet running,
Laughter rippling on the air—
A bright face like a sunbeam,
With a mist of golden hair;
Two little round arms, rocking
Her dolly to its rest,
Two little dear lips, humming
Sweet music, like the blest.

Two tiny white teeth, pearly
As the shells beside the sea—
Two precious, earnest blue eyes,
Looking trustfully at me;
Two dimpled, fat hands, wandering
Across my brow and face,
And oft two kisses given
With cunning baby grace.

Daily a new charm adding
To her little stock of ways,
Some quaint, wise imitation
Acted over in her plays,—
Oh! winning baby Alice,
With thy pretty, playful glee—
'T would sadden *more* than *two* hearts
To part with such as thee!

CULTIVATOR MARY.

For the Ohio Cultivator.

Tree Poetry and Tree Beauty.

Our tree poetry spread forth its branches, budded, blos-omed, from the following germ of instillation, when our young ideas first began to shoot:

"Zaccheus he
Did climb a tree,
His Lord to see."

All men and women have more or less poetry in their souls. Why is it then that we have so many bad grists of poetry? The machine is imperfect; some grind too fine, while others grind too coarse; some grind fine and then coarse, which spoils the whole grist. Sometimes the machine becomes obstructed and it stops short, leaving the hidden beauties just ready to unfold, to take their flight. But the greatest trouble with many modern poets is, they start with too great a momentum, and acquire such a velocity that they cannot stop when they get through. They grind too long—in fact a long time after there is any thing in the hopper to grind. Hence so much cheap poetry; much of it has the ring and jingle, but alas! how empty. I would let the poetic lyre hang to rest under the listening shades, and let nature sing from the tree, the forest.

Reader, did you ever take shelter beneath a tree in a shower, and fall into a poetic revery, as the great drops aforesaid came down first upon your knee, then upon your shoe, then upon the tip edge of your hat rim, spattering in your face? Just then the instinctive thought flashes across your mind, should the tree overhead be struck with lightning, how quick it would take the poetry out of you. Poetry is nothing more nor less than electric fleshes, and when they come in homeopathic doses, though sometimes excruciating, they rarely kill. A flash (not in the pan) runs thiswise:

"A thing of beauty is a joy forever."

Otherwise, a joy is a thing of beauty photographed upon the soul, warranted never to fade, even when the soul takes its mystic flight from its earthly chrysalis. Our first great joy is life, and it seeks after other little joys, and takes them home to nurse, until a great family of them is reared and gathered around the soul's fireside. How the heart melts with gladness as one of these little smiling joys come between us and despondency! Every tree has its peculiar beauty—the erect, the spreading, the drooping—each serves to fill out the variety which is the spice of beauty as well as of life. Did all trees look alike, we would soon cease to see any beauty in them. Then there is the lover's or trysting tree, where you could see the moon and the moon not see you. Were some trees accustomed to eavesdropping, how many curious persons would tap them for their romances! We could imagine a new source of "yellow-covered literature," truly labor-saving, drawn without overstraining the imagination by candle-light. A home without trees is a blank—a house, merely, with no endearing ties. Who wants to stay in a house with no trees to keep off ghosts and hobgolins?—desolate, lonesome, dreary and bleak! Otherwise, who does not love a home with its quiet retreats, lovely shades and walks, and its beautiful trees! Beautiful homes are contagious; others will also take pattern, and beautify their homes. They also have their moral effect; no passers-by can look upon their beauty and contemplate their sacred joys, without having all the mean and selfish passions driven from the breast. How endearing and how many heart ties have such homes, and how children who have left them, yearn and revert back to them, with a tear perhaps for the memory. Plant trees! Gentle reader, (old one, we

mean,) does the old home tree of childhood, beneath whose matronly branches your childish glee gave vent, and the one of drooping foliage over the well or spring beneath which you have so many times quenched your parching thirst, *ever haunt your memory?* If so, plant trees!

Mt. Gilead, Nov., 1858. C. W. C.

Proper Use of Pork as Food.

The Scientific American having endorsed the opinion that "A fat hog is the very quintessence of scrofula and carbonic acid gas, and that fat pork was never designed for human food, making no red meat or muscle," etc., Dr. Holston of Zanesville, who is one of the most intelligent physicians of Ohio, wrote to the Courier:

A fat hog is truly the quintessence of scrofula, for scrofa in Greek is *hog*, and the derivative scrofulous means *hoggish*. The disease scrofula was so called when medical science was in its infancy, from its *supposed* resemblance to some diseases of the hog, and then the inference was easy, that eating the hog (scrofa) produced the hog-disease (scrofula.) It is well known, however, that our American Indians and the Hindoos, who never use pork, are liable to this disease; that in Europe it prevails *chiefly* among the ill-fed poor, who hardly taste meat of any kind.

On the other hand the Chinaman and our own pioneers, who hardly eat any other flesh, are remarkably healthy and exempt from scrofula—a disease we have much more reason to suspect as originating long ago from the hereditary taint of an unmentionable disease favored by irregular living and poor diet.

In the South, from their sleek appearance and *exemption* from scrofula, you can at once distinguish the bacon-fed negro.

These examples may suffice on that head.

Fat Pork is not in any sense carbonic *acid*, but hydro-carbon, a combination of hydrogen and carbon. It becomes carbonic acid and water by combining with oxygen in the act of being burned or digested, which is much the same thing—giving off during those processes large amounts of heat and light.

It is true the *fat* of fat pork does not make blood or red flesh, though the lean which is always eaten alone, *does*. It is as your article says truly, material for breath. Well, that is a good deal. It is supposed that if the writer's breath had stopped five minutes before he took his pen, we should never have seen his article on fat pork.

But it does more. All the fat that goes into the stomach and thence into the blood does not undergo slow burning in the lungs by the process of burning, but is deposited in the body as *human* fat. Now a certain amount of fat is so necessary for the proper play of all the parts, muscles included, that without it, the body, like an ungreased engine, wears itself out by its own friction. In consumption, the waste of fat is one alarming and most dangerous symptom, and the far famed cod-liver oil acts perhaps chiefly by supplying the blood with fat.

I am satisfied by experience that fat pork—when the stomach will receive it—does just as well. Moreover, few of those delicate persons that have so great an aversion to pork or other fat, ever live to see 40 years. They die young of consumption. Butter, sugar, starch, vegetable oils, act to some extent as animal fat, and in tropical climates are used as substitutes.

But go to the Arctic regions and see the refined Dr. Kane and his men devour raw walrus blubber with a gusto, as we would take a dish of ice cream, and you will conclude that "fat pork," particularly in our Arctic winters, is not so bad an institution.

We could not live on fat pork *alone*—nor on sugar and starch—though we could on bread. Bread, the *staff of life*, contains the materials both for breathing and making blood and red flesh (muscle) in a supereminent degree, greater even than lean beef or any other single article of food, and this, or some substitute, such as beans, peas, potatoes, etc., is always eaten with fat pork, so that there is a sufficient supply of blood and flesh-making material. However, excess is bad, and the fat pork must not constitute the bulk of a meal.

Chemical analysis is a poor substitute for the observation of facts in the living body, nor can we even base very much on experiments made on Mr. Martin, the man with the hole in his stomach, by which food can be introduced and digestion observed, for that is not nature's way of getting it there, and a stomach with such an unnatural opening is much like a leaky dinner pot with a hole in the bottom stuffed with a rag. Extended experience alone can settle such a question.

The Greeks and Romans esteem pork as a luxury, and a most wholesome diet; their athlete and gladiators (prize-fighters) were fed on pork. Our own Saxon (Teutonic Scandinavian) ancestors esteem it so highly that they, even in their heaven, provided a great hog with golden bristles, called Gulliborstli, of whose bacon the heroes of Walhalla dined every day, when at night the picked bones again united and became covered with a fresh supply of fat pork. In this estimate of the hog, the mass of mankind, not of the Shemite race, (Jews, Turks, Arabs, etc.,) who follow Moses' law, that had spiritual and representative meaning, have in all ages agreed, and will agree, as long as man has canine teeth, and lives by *drawing his breath*. Whenever the Scientific American or Prof. Liebig will discover a new process of living without breathing, we may be guided by their opinion; till then, I opine, "good *corn-fed* (and no other is good) pork" will rule the roast, of which themselves will not be slow to partake.

My remarks are of course only applicable to men, women and children with comparatively healthy stomachs, who have sufficient exercise, with pure air and pure water.

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MARKETS.

OHIO CULTIVATOR OFFICE, Nov. 27, 1858.

The markets for farm stock and produce have worked up to a fair standard, and farmers have no reason to complain of prices. The producer is again in the ascendant, and we town's folks who have to buy, pay pretty well for our provisions. We presume the fat hogs are mostly marketed, at least they ought to be. Also let the dairy produce slide as fast as it is ready. Grain may pay for storing a while longer, but it would not be best to lose a good offer.

The Cincinnati *Price Current* reports:

GRAIN.—The firmness in the Wheat market noticed in our last review, has been well maintained, and the finer grades are generally a shade higher, and strictly prime Kentucky white has advanced to $1.20. The sales at $1 15@1.20 for choice Kentucky white, $1.10 for prime Ohio and Indiana white, $1.05@1.07 for good do do, 90c@$1 for common to fair do, and 90c@$1 for fair to prime red. The demand for Corn has continued brisk, and with very light receipts, prices have advanced. Sales at 57@58c for round lots, and some small lots sold to feed stores as high as 60@65c. Barley, 75@76c for prime fall, 70c for prime Spring, and 55@65c for common and fair samples. Rye at 68c. Oats brisk at 60@61c for old, while new would not command over 57@58c on arrival.

CATTLE.—Beef Cattle are unchanged, with a demand about equal to the supply, at $2.25@3 25 per cwt. gross, and in some cases $3.50 has been obtained for extra large.

HOGS.—The demand for Hogs has been, in the main, active throughout the week, a large business having been done. About the middle of the week, under the influence of large receipts, and a temporary panic, prices declined to $6.25 for 200 lb. hogs, but this decline was soon recovered, and prices close about at the same rate they did last week, namely, $6.50 for those averaging 200 lbs. As high as $6.75 has been for hogs averaging 240 lbs., and $7 was asked for such in many cases, but was not obtained, except for one lot very large, averaging near 300 lbs. The sales during the wood add up 39,000 head, at $5.25 for light slop fattened; $5.25@6 25 for do corn fattened; $6.25@6.60 for those averaging 200 lbs.; and $6.60@6.80 for heavy—say those averaging 225 to 250 lbs.

SEEDS.—A fair demand for clover, and holders are generally asking higher rates say $5.90@6.10. Flax is steady at $1.40.—Timothy dull, at $1.75@$2.

BUTTER.—The market has been active and buoyant throughout the week, and prices of choice have slightly advanced, closing firm at 20c for choice roll; 14@16c for good do; 20@22c for choice W. R. firkin, and 10@12c for common.

CHEESE.—There has been a very brisk demand throughout the week, and the market has advanced to 8c for selected W R. and 8¼@8½c for extra large do. English Dairy is firm at 10@10½c; Nutmeg 10@11c, and Pine Apple 17c.

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Dec., 1858.